

Appln No. 10/615,635
Amdt date December 22, 2004
Reply to Office action of August 27, 2004

REMARKS/ARGUMENTS

Summary of the Office action

In the Office action, the following comments and rejections were made:

- the number of claimed inventions was noted and a restriction requirement held in abeyance;
- claims 1 - 33 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent 6,701,252 to Brown (the Brown patent);
- claims 1 - 3, 5, 8, 9, 11 - 14, 16, 24 - 28 and 31 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0022129 to McGeever, Jr. (the McGeever Jr. publication);
- claims 21 - 23 and 34 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,956,291 to Nehemiah et al. (the Nehemiah et al. patent);
- claims 1 - 3, 5, 8, 10 - 14, 23, 24 - 27, 30 and 31 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,798,733 to Ethridge (the Ethridge patent); and
- claims 1 - 20 and 24 - 33 were rejected under 35 U.S.C. § 103(a) as being obvious in light of the combination of the Nehemiah et al. patent and U.S. Patent Publication 2002/0140599 to King (the King publication).

Restriction requirement

Claims 8, 17 - 23 and 34 were cancelled without prejudice in response to the restriction requirement held in abeyance.

Rejections in light of the Brown patent

Claims 1 - 33 were rejected as anticipated by the Brown patent. Applicants respectfully submit that the Brown patent does not teach the combinations claimed above and in particular the limitations of (see claim 1):

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a waterproof housing;
a processor contained within the waterproof housing;
a global positioning system receiver contained within the waterproof housing and connected to the processor; and
a pressure transducer connected to the processor;
wherein the global positioning system receiver includes an antenna; and
wherein the pressure transducer is configured to measure depth under water.

The Brown patent generally describes a “system for underwater GPS navigation” involving “locating the antenna above water and the display below water” (see Abstract).

Rejections in light of the McGeever Jr. publication

Claims 1 - 3, 5, 8, 9, 11 - 14, 16, 24 - 28 and 31 were rejected in light of the McGeever Jr. publication. Applicants respectfully submit that the McGeever Jr. publication does not teach the combinations claimed above and in particular the limitations of (see claim 1):

a waterproof housing;
a processor contained within the waterproof housing;
a global positioning system receiver contained within the waterproof housing and connected to the processor; and
a pressure transducer connected to the processor;
wherein the global positioning system receiver includes an antenna; and
wherein the pressure transducer is configured to measure depth under water.

The McGeever Jr. publication teaches a “navigational device for an underwater diver” that involves “a SCUBA Flag/Antenna Float, positioned on the surface of the water, containing a Spring-loaded Cable Reel which is connected via a Signal Umbilical Cable to a GPS Capsule

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carried by the underwater diver. A GPS Antenna and power supply provide a signal to a GPS Receiver/Display which is encased in the GPS Capsule.” (see Abstract)

Rejections in light of the Nehemiah et al. patent

Claims 21 - 23 and 34 have been cancelled without prejudice in response to the restriction requirement held in abeyance. Applicants reserve the opportunity to respond to the rejection of these claims in light of the Nehemiah et al. patent.

Rejections in light of the the Ethridge patent

Claims 1 - 3, 5, 8, 10 - 14, 23, 24 - 27, 30 and 31 were rejected in light of the Ethridge patent. Applicants submit that the Ethridge patent does not teach the combinations claimed above and, in particular, does not teach the limitations of (see claim 1):

- a waterproof housing;
- a processor contained within the waterproof housing;
- a global positioning system receiver contained within the waterproof housing and connected to the processor; and
- a pressure transducer connected to the processor;

wherein the global positioning system receiver includes an antenna; and

wherein the pressure transducer is configured to measure depth under water.

The Ethridge patent teaches a “interactive position guidance apparatus and method for guiding a user to reach a predetermined target position”. The device described in the Ethridge patent is “[a] position guidance apparatus . . . used to aid a parachute jumper in reaching a predetermined target position in an interactive manner.” (see Abstract) Embodiments of the inventions described in the Ethridge patent are shown in FIG. 3 and FIG. 11. The embodiment in FIG. 3 is described as follows (see Col 5: Line 33 - Col 5: Line 51):

The position guidance apparatus 100 includes a GPS receiver 200, which in turn includes a GPS antenna 95 and a GPS computer processing unit (CPU) 90. The GPS antenna 95 can alternatively be in the form of unit separate mounted on a different location of the user, such as in a backpack of the user as will be described in later embodiments of the present application. ...

As shown in FIG. 3, the position guidance apparatus 100 further includes a centrally located CPU 30 which receives GPS signals from GPS receiver 200. The CPU 30 is further connected to an electronic compass 80 and digital altimeter 70 to receive directional and altitude signals therefrom.”

In the embodiment shown in FIG. 11 the “GPS receiver 200 can be a separate unit mounted on the top of a backpack of a user.” (see Col 13: Lines 61 - 62)

Rejections in light of the combination of the Nehemiah et al. patent and the King publication

Claims 1 - 20 and 24 - 33 were rejected in light of the above combination. Applicants respectfully submit that such a rejection is entirely inappropriate as the rejection was made without identifying any teaching that would suggest to one of ordinary skill in the art the combination of features from the Nehemiah et al. patent and the King publication. The MPEP requires (see MPEP §706.02(j) - emphasis added):

To establish a *prima facie* case of obviousness, three basic criteria must be met. **First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.** Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and

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not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The rejection simply states that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nehemiah et al by incorporating the teachings of King so that an accurate indication of location is provided via GPS such tat an accurate tagging of a dive log may be obtained without requiring the installation of a plurality of ultrasonic transmitters/transponders on the seabed.

The Office action does not identify a “suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or to combine reference teachings” satisfying the requirements of the MPEP. Quite the contrary, the fact that the two references teach completely competing approaches to locating position under water is a teaching away from the combination of the two references. Applicants submit that one of ordinary skill in the art would not be motivated to abandon the teaching in Nehemiah et al. of the use of a plurality of ultrasonic transmitters/transponders in favor of the teachings of the King publication without an express teaching of the desirability of making this specific substitution.

In addition, Applicants respectfully submit that neither the Nehemiah et al. patent nor the King publication together or in combination teach the combinations claimed above. In particular, no combination of the references teaches (see claim 1):

- a waterproof housing;
- a processor contained within the waterproof housing;
- a global positioning system receiver contained within the waterproof housing and connected to the processor; and
- a pressure transducer connected to the processor;

wherein the global positioning system receiver includes an antenna; and

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wherein the pressure transducer is configured to measure depth under water.

As discussed above, the Nehemiah et al. patent involves the use of “a plurality of ultrasonic transmitters/transponders on the seabed.” The King publication describes an “integrated dive flag/float and GPS navigation system for scuba divers.” The King system is described as follows (see Abstract):

A SCUBA diving flag/float assembly is used to support a GPS antenna on the surface of the water for use by divers in performing underwater navigation. An associated GPS receiver is integrated with a dive flag line take-up mechanism such a spool or SCUBA diving line reel. The dive flag line and cable interconnecting the GPS receiver to the GPS antenna is integrated within a single assembly, or in an alternative embodiment, braided together forming a single tether. ... Alternatively, a GPS receiver may be mounted on or in the dive flag/float assembly and navigational information relayed to the diver under the water.”


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Conclusion

Applicants respectfully submit that for the reasons stated above, the currently pending claims are allowable. Therefore, Applicants request the prompt issuance of a Notice of Allowance.

If Applicants' counsel can be of assistance, please contact them at the number provided below.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

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THD/DJB/syb

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